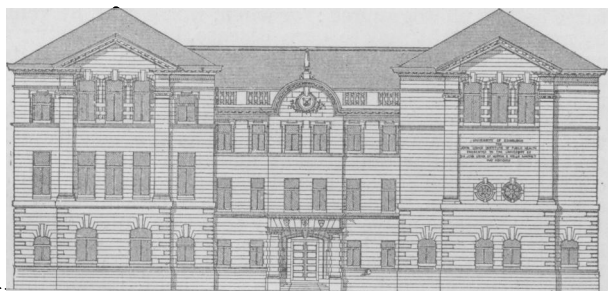


## THE JOHN USHER INSTITUTE OF PUBLIC HEALTH OF THE UNIVERSITY OF EDINBURGH.

THE late Mr. A. L. Bruce, by a codicil to his will, dated November 27th, 1893, left a legacy of £5,000 to the University of Edinburgh to assist in founding a Chair of Public Health. On the resignation of Sir Douglas Maclagan the University authorities resolved to institute a Chair of Public Health apart from the Chair of Medical Jurisprudence. To further this end Mrs. A. L. Bruce gave £500; Miss A. Blackwood Bruce, £500; other members of the family, £163; Messrs. William Younger and Co., £1,000; and Sir John Usher completed the endowment of the Chair by a gift of £8,000, bringing the total funds up to £15,163. Dr. Charles Hunter Stewart, who had been for many years Assistant to Sir Douglas Maclagan in the department of Medical Jurisprudence and Public Health of the University, was appointed to the new Chair.

The Public Health Laboratory in the University was opened in 1884, and was extended in 1890 to provide further facilities for teaching and research in bacteriology and chemistry in relation to the diagnosis and prevention of infectious diseases. It was soon found that the accommodation at the new University buildings was inadequate for the wants of the new chair. At this stage Sir John Usher again came to the rescue, and generously offered to give £10,000 to build and equip an institute of public health on condition that the University should find the site. At first it was thought that the Institute might be built on ground belonging to the University between the music classroom and the Students' Union, but as the light was defective this idea was abandoned. After consideration a site in Warrender Park Road was selected. The Committee appointed by the University Court to take charge of the building and equipment of the Institute appointed Messrs. Leadbetter and Fairley to be the architects, and these gentlemen, along with Professor Hunter Stewart, visited the Public Health Institutes of England and the Continent. On their return plans were made and submitted to Dr. J. B. Russell, of the Local Government Board for Scotland, who expressed his approval.



The institute stands on the south side of Warrender Park Road, with a frontage to the north. The exterior of the building shows a treatment of the classic Renaissance detail, somewhat resembling the new University buildings in Teviot Place. It is roofed with red Roman tiles, and is rectangular in plan. The building itself is 133 ft. long and 48 ft. broad, while the ground in which it stands is 250 ft. by 110 ft. There are three stories. The front faces the north, the central part is recessed, and the main entrance is the middle of the recess. Over this entrance a centre shield shows the Scottish lion, while on either side are the arms of the Chancellor of the University (the Right. Hon. A. J. Balfour) and the arms of Sir John Usher. Higher still the arms of the University appear. On the front of the west wing is this legend in deeply-incised letters:

University of Edinburgh.  
The  
John Usher Institute of Public Health  
Presented to the University by  
Sir John Usher, of Norton and Wells, Baronet.  
May, MDCCCII.

On passing through the revolving door of the main entrance one stands in the handsomely-panelled oak hall,

where on the left a bust of the donor, Sir John Usher, has been placed.

For convenience of description it may be well to begin at the basement, entrance to which is obtained by a stair down from the Entrance Hall or by a door at the back.

### THE BASEMENT.

At the east end we find an electric motor of 5-horse power for giving high pressure air, and for giving water at a constant pressure. Coal cellar and boilers fill up the space till we come to a chamber in which there is to be placed on a concrete bed rock a large centrifuge worked by a small electric motor. Behind this is an incinerating chamber for the cremation of the bodies of animals used for purposes of investigation or of infective material. Next in order we have staircase and lift, and at the west end a cold room kept cold by Hall's patent carbonic anhydride refrigerating machine, the pump worked by a second electric motor of 5-horse power supplied from the city main.

### THE GROUND FLOOR.

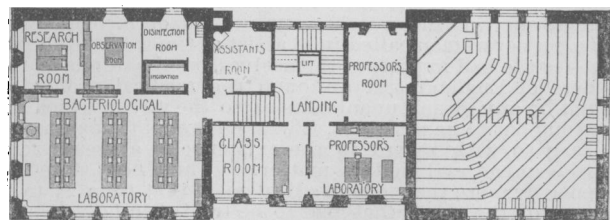
To the left of the entrance hall is a small research room, No. 1, in the centre of which is a table 6 ft. square, and arranged so that one or two students can work at each side. It is provided with gas nozzles, pressure water taps, steam taps, reagent shelves, and ventilating opening in connexion with the fan arrangement afterwards to be referred to. Next to this, in the north-east part, is the Museum, a lofty chamber 40 ft. long and 25 ft. broad, lighted by six large windows and floored with marble mosaic. The Museum is educational. Large cases of Spanish mahogany have been prepared, and several of these are in their places. One at the west end is to contain tubes with permanent cultures of air and water bacteria in stands, and one at the east end tubes containing permanent cultures of pathogenic organisms. Others will show preserved specimens illustrating the diseases of animals communicable to man; apparatus for hygienic investigation, chemical, bacteriological, and meteorological; working models of filter beds and working examples of filtration of water; illustrations of the means taken for the protection of workmen engaged in noxious trades; disinfectants and disinfecting apparatus, etc.

To the immediate right of the entrance hall is a gas analysis and photographic room fitted with work table, sink, etc., and a micro-photographic apparatus laid on a bed-rock of concrete. Beyond this, and still on the north side of the building, is a suite of three rooms, the first an office, for the bacteriological work of the City of Edinburgh. Behind these are two animal cellars and a lavatory. Behind the Museum is the caretaker's house, consisting of parlour, kitchen, and bedroom, with entrance only from the outside at the back.

### THE FIRST FLOOR.

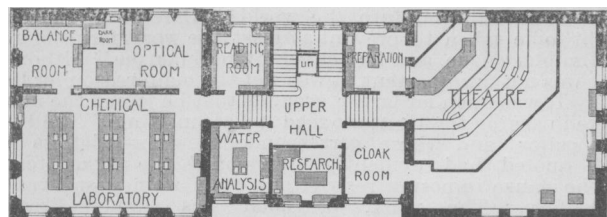
The whole of the west wing of this and the second floor are occupied with the Lecture Theatre, with entrance from the first-floor hall. The rostrum with table in front, fitted with gas nozzles, pressure air-pipe, two circular openings to a flue to the fast fan, and slate and lantern screen behind, occupies the south-east corner, while seats for 274 students are staged on the line of a catenary curve round this. The lecturer's table can be seen with ease from every part of the theatre. The lighting is from side windows and a large cupola. When lantern demonstrations are being given, the whole room can be darkened by blinds controlled at the rostrum. A space for the lantern operator stands high up in the staging. In the middle section of the Institute, and to the back, is a small preparation room with a door leading on to the rostrum; while in the corresponding space in front is a cloak room. Over the entrance hall is research room No. 2, and adjoining it a water analysis room. In the north-east section, over above the Museum is the Chemical Laboratory with three double tables, fitted up for eighteen workers. Each table is supplied with cold water, pressure water, pressure air, steam, gas, and electricity for each worker. The tables have drawers, cupboards, writing slide, and shelves for each student; and all noxious fumes and steam are carried off from each space by flues leading to the exhaust chamber. In the room also is a large fume closet, a steam drying chamber for residues, and a filter chamber. The pressure water waste is by an ingenious

device returned to the pump tank for re-use. Behind the chemical room there is a balance room, with a double glass delivery table so that a dessicator can be passed through without opening the intervening door; an optical room with a dark room in one corner; while behind the water analysis room there is a reading room.



THE SECOND FLOOR.

The theatre in the west wing has already been described. Adjoining it in the front part is the professors' laboratory, fully equipped with tables, sink, water, steam, gas, and electricity, hooded chamber, etc. Next to it, also in the central front portion, is a small class-room for either advanced students or detailed demonstrations. Behind these two rooms there are respectively the professors' retiring room and the assistants' room. In the east wing to the front is the bacteriological laboratory, with three large double tables equipped for twenty-four students. The plan of these tables and their ventilation is the same as in the chemical laboratory. Among the special equipments of this room one



noted a steam jacketed autoclave, a steam jacketed filter apparatus, a stone-topped table for incubators and sterilizer. Behind the bacteriological laboratory there is research room No. 3, an observation room, a disinfection room for experiments and demonstrations with the various disinfectants, an incubation room to be kept at the temperature of the blood by automatic electric hot-water boiler, by which, if the temperature rises above blood heat, the supply of electricity is lessened or cut off, and contrariwise, if it fall below the supply, is increased.

#### CONSTRUCTION.

In what may be called the attic floor there is a tropical room again for incubation, and there is the 5-horse power electric motor for working the exhaust fan for carrying away noxious fumes from the various laboratory tables. The flues from the tables leading to the exhaust chamber are for some 9 feet covered with asbestos paint, and over that for a similar distance a lining of thick asbestos paper to prevent the risk of fire. On the roof is a platform for any work that may require to be carried on out of doors.

The fittings in the various laboratories and rooms are of teak. The attention that has been given to detail compels admiration. Everything has been done under the eye and direction of Professor Hunter Stewart.

A hand lift runs from basement to second floor. There are three telephones to admit of rapid communication between the different parts of the Institute.

The building throughout is of fireproof construction, the floors having first a bed of concrete on an iron framework, then a large free space with a wooden floor above. The heating is by hot water on the low-pressure plan, and the whole building is lighted by electricity. Electricity from the Corporation mains also supply the four motors already referred to.

It has been said that Sir John Usher offered £10,000 to

build and equip the Institute. This sum, we understand, has been very considerably exceeded, and Sir John has generously made up the deficit.

### THE MIDWIVES BILL.

#### SECOND READING IN HOUSE OF LORDS.

[SPECIAL REPORT.]

THE Midwives Bill came up for second reading in the House of Lords on Friday, June 20th.

THE DUKE OF NORTHUMBERLAND, in moving the second reading of the Bill, said he believed there was a general consensus of opinion in favour of something being done to remove the evils now existing in connexion with the work of midwives. A similar Bill had been before their lordships' House on a former occasion, and it had a very favourable reception. There were, he believed, between 10,000 and 15,000 women in the country practising as midwives. These women were said to attend about 450,000 cases annually in which doctors were not called in, and yet there was absolutely no qualification test—no guarantee that these women were fitted for the duties they undertook. It had been quite possible for any old drunken hag, with no ideas of cleanliness and no acquaintance with the proper methods of conducting such a business, to advertise herself as a midwife and to carry on that business without let or hindrance. The reports of the coroners' courts furnished a very melancholy but at the same time a very instructive lesson as to the necessity for a Bill of this kind. Perhaps the best proof of that was the fact that, out of about 250 coroners in England and Wales, more than 200 had expressed their strong approval of a Bill of this kind. In the London hospitals puerperal fever was now practically unknown, for it was an absolutely preventable disease, and yet it had been rather on the increase over the country. The present state of things, so far as many midwives were concerned, not only led to deaths but also in other cases to a large amount of suffering and disease, which was especially grievous in the case of poor women who had to work for a livelihood. Similar consequences as to sickness and trouble afflicted the children. He was told it was calculated that 40 per cent. of the blindness treated in blind asylums was due to want of care at childbirth. There was no doubt that in matters of detail the question was fraught with difficulty. He would not ask the House by accepting the second reading to adopt every sentence in the Bill. He frankly admitted that it required careful consideration in detail, and he trusted it would have that consideration at the Committee stage. Meantime, he only asked the House to affirm the principle and main purpose of the Bill. That principle was simply that in order to secure a proper degree of the knowledge and training required by midwives, and also to secure some guarantee of their good character, some kind of certification of midwives should be required. One difficulty which had caused much heartburning in former years was the position of existing midwives, who were more or less fitted by experience for their work in ordinary cases and whose character was above reproach. Their interests were fairly safeguarded by the Bill, and the difficulty raised upon a former occasion as to the inadequacy of local control had also been met by giving the county councils large powers of supervision.

LORD WELBY said he would not impede the second reading of the Bill, but he thought attention should be given in Committee to the considerable powers suggested for the Board proposed to be created, especially the power of spending public money which had to be furnished by another authority—the rating authority.

THE LORD CHANCELLOR (Earl Halsbury) said he thought there were more serious objections to the Bill. At the same time he would not undertake the responsibility of moving its rejection, because there might be circumstances contemplated by the Bill which required regulation. He could not help thinking, however, that the person who devised and drafted the Bill had in his mind the case of large populations, where everybody had within easy reach ample means of calling in surgical assistance, and had entirely omitted to consider the case of country villages, where the getting of a trained nurse easily or at short notice might be practically impossible. He was assured in letters from